

# What's Pushing and Pulling the Use of Solar Dryers in Nepal?

*Enter Nepal's agricultural landscape, where traditional methods meet modern innovation. As the country battles food insecurity, the SolarFood project aims to combat food-loss with solar-driven food dryers. By shedding light on the factors pulling back the spread of the technology, this thesis hopes to provide the knowledge needed to push the innovation and pave the way for the use of solar dryers.*



Picture by: Ida Sonesson.

Farming is very important in Nepal. About 30 percent of the land is used for agriculture, and nearly two-thirds of the 29 million people rely on it. However, over half of Nepalese households do not have year-round access to enough safe and nutritious food. A big reason for this is that a lot of food is lost after harvest because of poor preservation and storage methods.

In Nepal, people traditionally dry food under the open sun. This means that the food is exposed to rain, wind, dust, and insects during the drying process, which often leads to more food going to waste. The SolarFood project, which this thesis is a part of, strives to improve this drying method in Nepal by introducing a solar driven food dryer. This with the hope of reducing food losses and making nutritious food available for more Nepalese people throughout the year.

Solar dryers have existed for quite some time in Nepal but is still not commonly used among small-scale farmers. Why is this? That is the main question this thesis hopes to answer. By gathering knowledge from literature and interviewing farmers in different regions of Nepal, we gained some insight into the challenges that could hinder the spread of solar dryers and

how these could be addressed.

Firstly, the dryer needs to be designed so that it not only dries the food in a quick and safe way but is also affordable, easy to use, movable, and built from materials that are locally available all over Nepal. The current dryer made in the project was found to be too heavy. This is a problem since many farmers want to place the dryer on the roof, but 100 kg of steel and glass do not fit through their narrow staircases. Another problem is that some materials were found to be hard to find in more rural places. This hinders the possibility for the dryer to be built everywhere in Nepal, which is also a factor that could hinder the use and spread of the dryer.

Even if the project manages to come up with an improved design of the dryer, nothing will change if people are unaware that these dryers exist. Most of the interviewed farmers had never heard of this technique before, and lack of awareness of these types of innovations was also frequently mentioned in the literature as something holding back the usage. How can you use something if you don't know it exists? To spread knowledge about solar dryers in Nepal, governmental initiatives, agricultural groups, and training programs can play important roles. These kinds of communication forums and initiatives might be a good start, setting the stage for information to spread among neighbors. Word-of-mouth appears to be a powerful means of communication, and knowing someone with experience using solar dryers seems to increase both trust and interest in the innovation! Our hope is that this project can be a way to kick-start the spread of information about solar dryers and that more farmers in Nepal will eventually start using the design of the project's solar dryer.